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July 1963

17 Pages

PHOTOGRAPHIC INTERPRETATION REPORT

SURFACE-TO-AIR MISSILE FACILITIES KAPUSTIN YAR/VLADIMIROVKA MISSILE TEST CENTER, USSR

CHANGES [redacted]

25X1D

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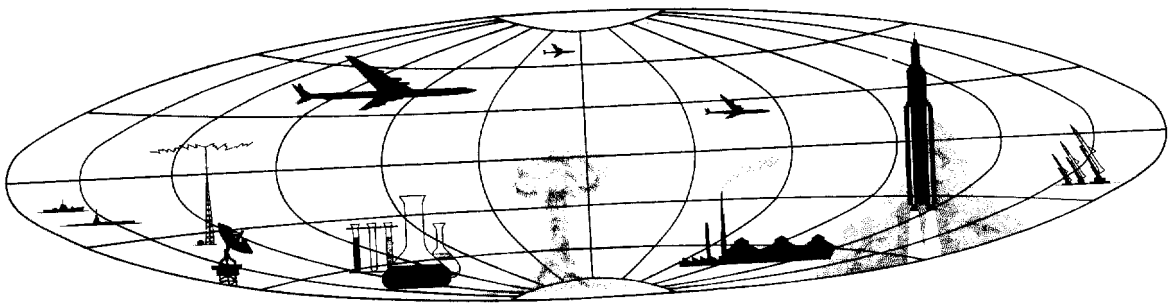

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PHOTOGRAPHIC INTERPRETATION REPORT

SURFACE-TO-AIR MISSILE FACILITES KAPUSTIN YAR/VLADIMIROVKA MISSILE TEST CENTER, USSR

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NPIC/R-126/63
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PREFACE

This report has been prepared under NPIC Project JN-127/62 in response to part "a" of CIA requirement OSI/R-83/62 requesting information on the Surface-to-Air Missile (SAM) Facilities at the Kapustin Yar/Vladimirovka Missile Test Center (KYMTC), based on KEYHOLE

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photography of [redacted]

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A detailed analysis of the KYMTC SAM Facilities based on TALENT photography of [redacted] was published in PIC/JR-1008/61. 1/ This report updates that earlier study. It follows generally the format of PIC/JR-1008/61, employing the same subject headings and letter and numerical designators where practical.

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Although this report is based primarily on photography of [redacted]

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[redacted] photography of [redacted] also was checked. The

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coverage was used mainly to determine construction progress on

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those facilities which had not been completed in [redacted] Changes since

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[redacted] are shown in red on line drawings accompanying the test. Mensural data included in the report are approximate because of the small scale of the photography and the lack of image definition inherent in it.

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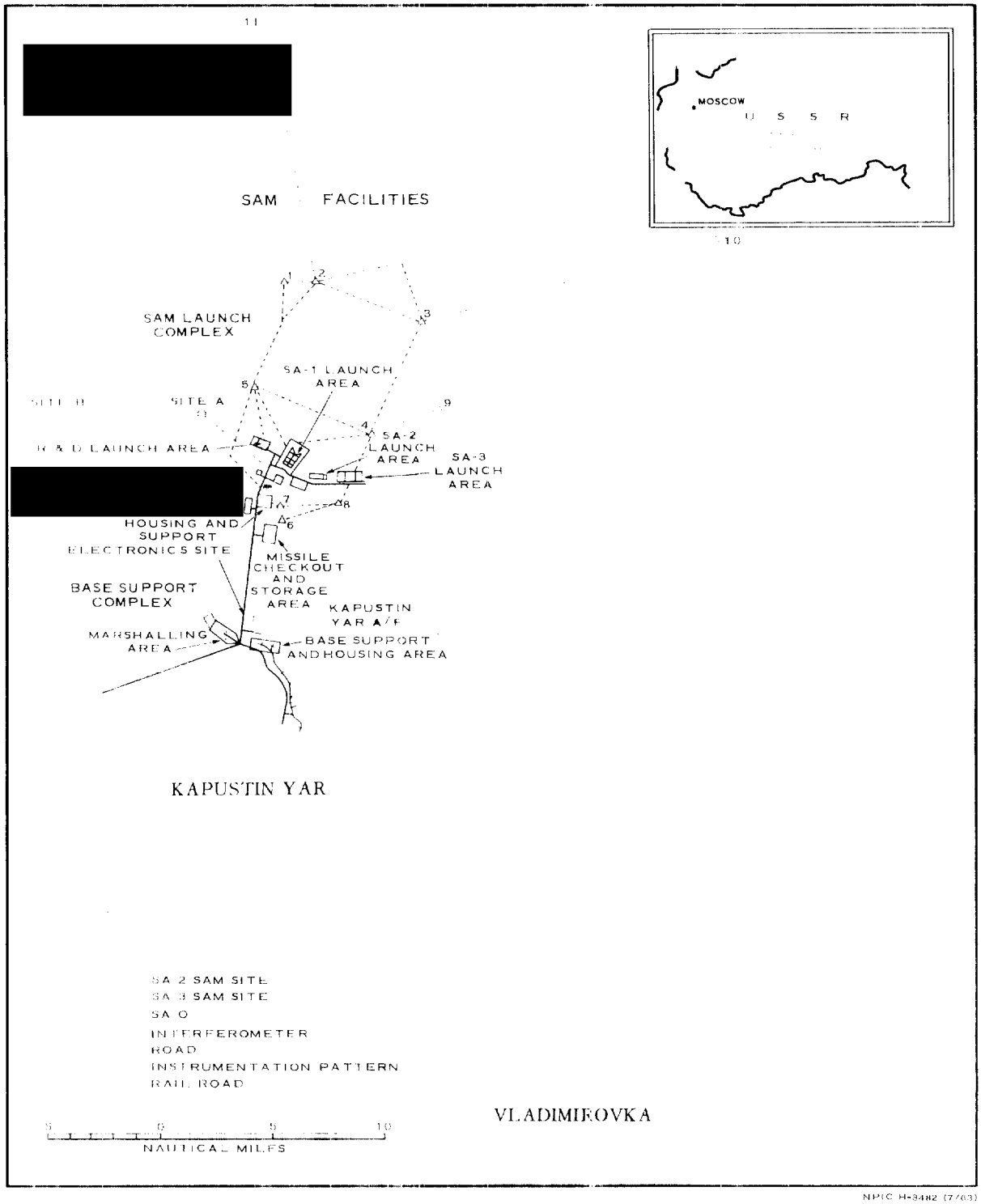

FIGURE 1. KAPUSTIN YAR/VLADIMIROVKA MISSILE TEST CENTER.

INTRODUCTION

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Since the [redacted] TALENT coverage, there has been continuing expansion within the SAM Facilities at the KYMTC (Figures 1 and 2). The major expansion observed is within the SAM Launch Complex where additional launch sites have been constructed in the R & D Launch Area, the SA-2 Launch Area (formerly the Troop Training Launch Area 1/), and the SA-3 Launch Area (formerly the New-Type SAM Launch Area 1/). Other developments include enlarged storage and housing facilities, an improved airfield runway, a probable radar control center, an operational SA-2 site, two SA-3 training sites west of the SAM Launch Complex, and three new instrumentation sites.

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In addition to new construction, photography of [redacted] revealed operational activity at Site B of the R & D Launch Area, the Herringbone Launch Area (formerly the Prototype Herringbone Launch Area 1/), the SA-2 Launch Area, the Marshalling Area, and the Kapustin Yar Airfield.

An analysis of the expanded SAM launch facilities at KYMTC was made in NPIC/R-123/62 2/, a study undertaken to determine the function of the ten new-type SAM sites (now referred to as SA-0 sites) co-located with SA-2 sites in the Tyura Tam, Vladimirovka, Plesetsk, and Petropavlovsk areas. This report concurs with the following conclusions stated in NPIC/R-123/62.

The two new sites in the SA-2 Launch Area at KYMTC probably will be used in the development of a new SAM system.

The existence of the Kordon SAM Training Center and the addition of two SA-3 sites west of the KYMTC SAM Launch Complex support the possibility that training in the KYMTC SAM Launch Complex has been reduced, thus leaving many of the launch areas and the instrumented range to be used for development and testing of new or modified SAM systems.

Identification of two new instrumentation sites forward of the KYMTC instrumented SAM range supports the hypothesis that an extended-range or otherwise modified SAM system is being developed.

SAM LAUNCH COMPLEX

R & D LAUNCH AREA

An SA-3 launch site (Site F) and two large vehicle or equipment revetments have been added to the western half of the R & D Launch Area (Figure 3). Site F is similar to Site B in the SA-3 Launch Area. It is semicircular and measures approximately 400 by 275 feet. The four launch positions are 50-55 feet in diameter; they are outside the semicircular service road and connected to it by short spur roads. The revetted guidance area, 80 by 80 feet, is at the approximate radial center of the site. A small building is located south of the guidance area. In [redacted] the site appeared complete but inactive.

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The two new revetments, each approximately 110 by 95 feet, are U-shaped and may accommodate vehicles or other equipment. Both revetments contained unidentified objects in

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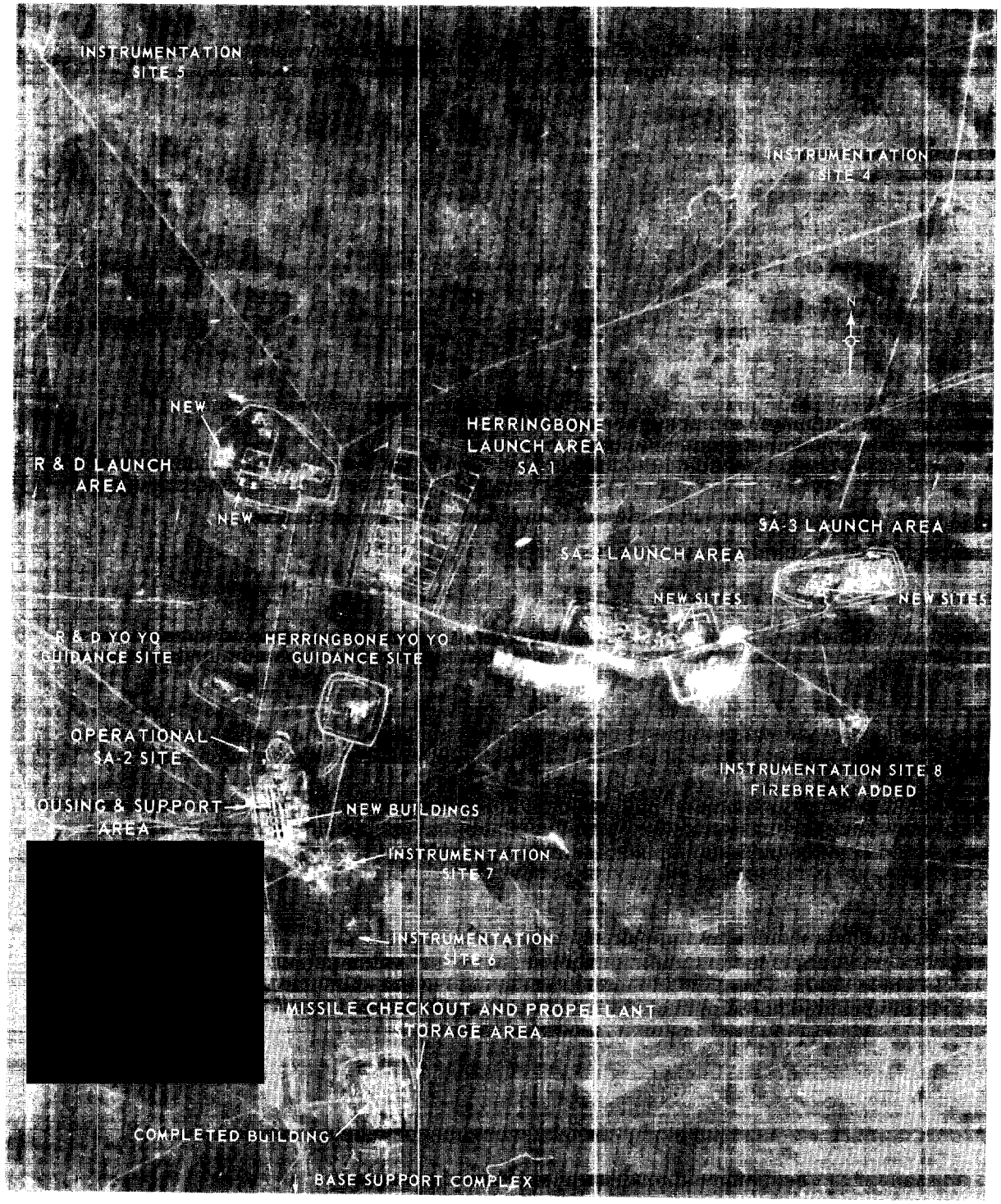

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FIGURE 2. SAM LAUNCH COMPLEX AND ASSOCIATED FACILITIES [redacted]

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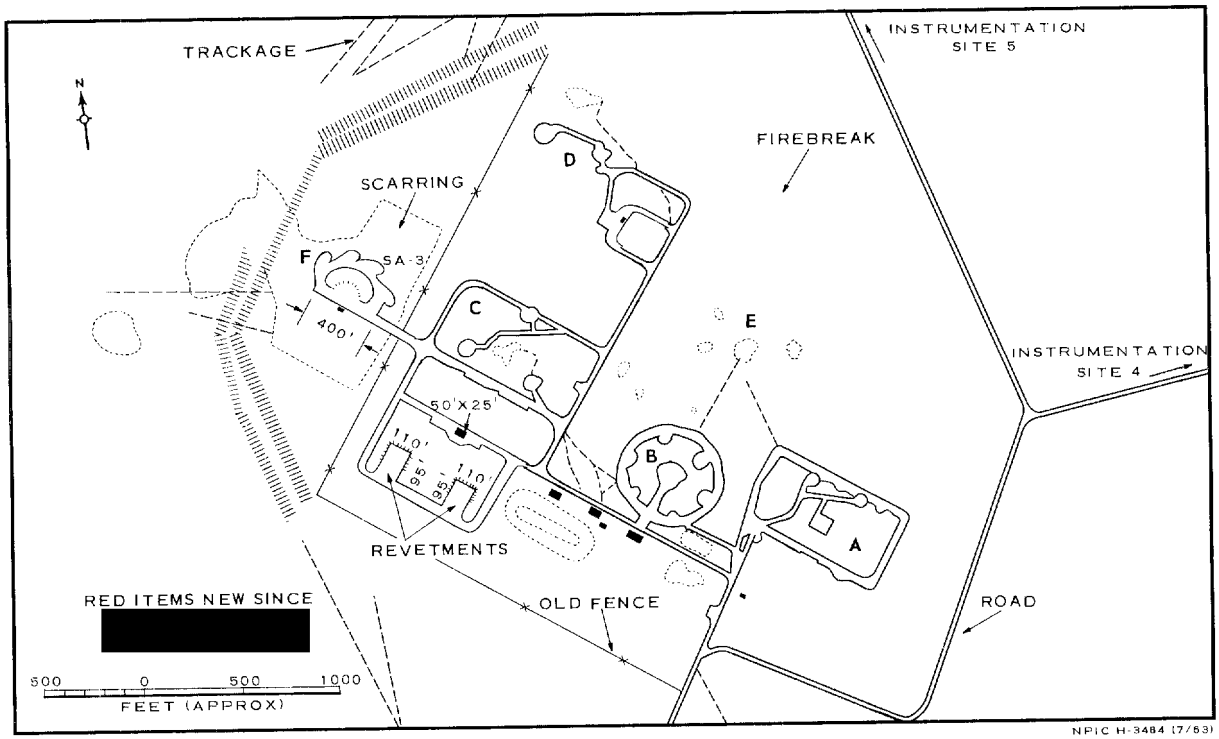

FIGURE 3. R & D LAUNCH AREA.

25X1D [redacted] They are located on the south side of a rectangle formed by a new concrete road. A possible drive-through building, 50 by 25 feet, is located on the north side of the rectangle.

Of the five original launch sites (Sites A-E) in the R & D Launch Area, only Site B was operationally active in 25X1D [redacted] Vehicles or equipment were visible on the guidance pad and several of the launch points may have been occupied.

25X1D New construction since [redacted] is apparent only at Site D or the original five launch sites. At Site D, a concrete service road--half of which was observed on earlier photography--has been completed and a hardstand and a possible drive-through building have been added. Both 25X1D serve the circular concrete pad present in [redacted] There has been no significant change since 25X1D [redacted] in the YO YO guidance site associated with the R & D Launch Area. The firebreak, which formerly bulged on the north side, has been straightened.

HERRINGBONE (SA-1) LAUNCH AREA

The Herringbone Launch Area appeared active in [redacted] Sixteen unidentified objects were observed on the roads at positions between launch points where missile transports or dollies would normally be parked (Figure 4). At 12 of the launch points, a slim dark pattern was observed in locations where launchers were specifically identified on earlier TALENT photography. However, the type of activity at the Herringbone Launch Site cannot be determined because of the small scale of the later KEYHOLE photography. A moving vehicle was seen on the outer access road serving the west side of the site. 25X1D

There is apparently only one change since [redacted] in the YO YO guidance site associated with the Herringbone Launch Area. A small building on the east side of the area has been removed. 25X1D

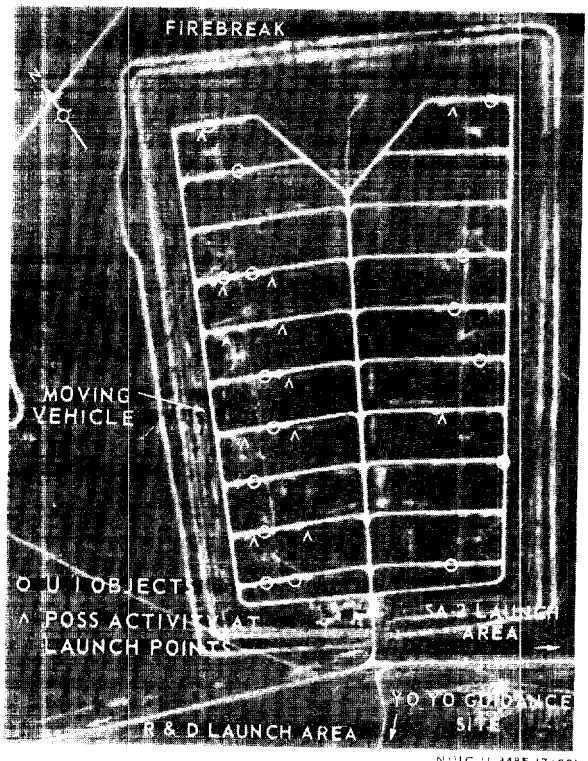

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FIGURE 4 HERRINGBONE LAUNCH AREA [redacted]

SA-2 LAUNCH AREA

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In [redacted] this area consisted of two SA-2 Launch Sites, formerly called Practice (Live) Firing Sites; six Launch Training Sites; and a Bivouac Site.

The launch and guidance revetments of the original two SA-2 sites (A and B) appeared unoccupied in [redacted] However, unidentified objects were observed on five hardstands within the fenced area of these sites. There has been no apparent structural change in the sites since [redacted]

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25X1D

East of these sites, in the area formerly occupied by three of the training sites, are two new launch sites (C and D), which are different in configuration from Sites A and B (Figures 5 and 6). They are semicircular and have four launch positions located along the inside of a perimeter service road.

Site C appeared complete but inactive in [redacted] It is approximately 625 by 360 feet and has four unrevetted launch positions 55-60 feet in diameter. Near the radial center of the site is an unrevetted guidance area 110 by 75 feet. A probable building is located south of the guidance area.

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Site D, under construction, appears to be similar to Site C in size and configuration.

Sites C and D are similar to the deployed SA-0 SAM sites previously reported in NPIC/R-123/63 as new-type SAM Sites. This report concluded that they are probably part of a new or modified SAM system rather than merely hardened training sites.

It cannot be determined from small-scale [redacted] photography whether the three training sites located west of Sites A and B are still active. Although trackage observed in [redacted] is still apparent, the practice firing sites are not visible.

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Trackage is also apparent at the Bivouac Site southwest of Sites A and B, but the area does not appear to be occupied.

South of the SA-2 Launch Area, a rectangular road pattern has been formed by two concrete spurs extending south from the main road servicing the area and a fourth section of road. This section of road widens into three probable hardstands whose function is not apparent at this time. Photography of [redacted] revealed unidentified earth scrapings to the east of the hardstands.

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Five unidentified vehicles were observed on [redacted] photography traveling west on the main service road between the SA-2 and Herringbone Launch Areas. The three vehicles in the center of the convoy were larger than the lead and trailing vehicles.

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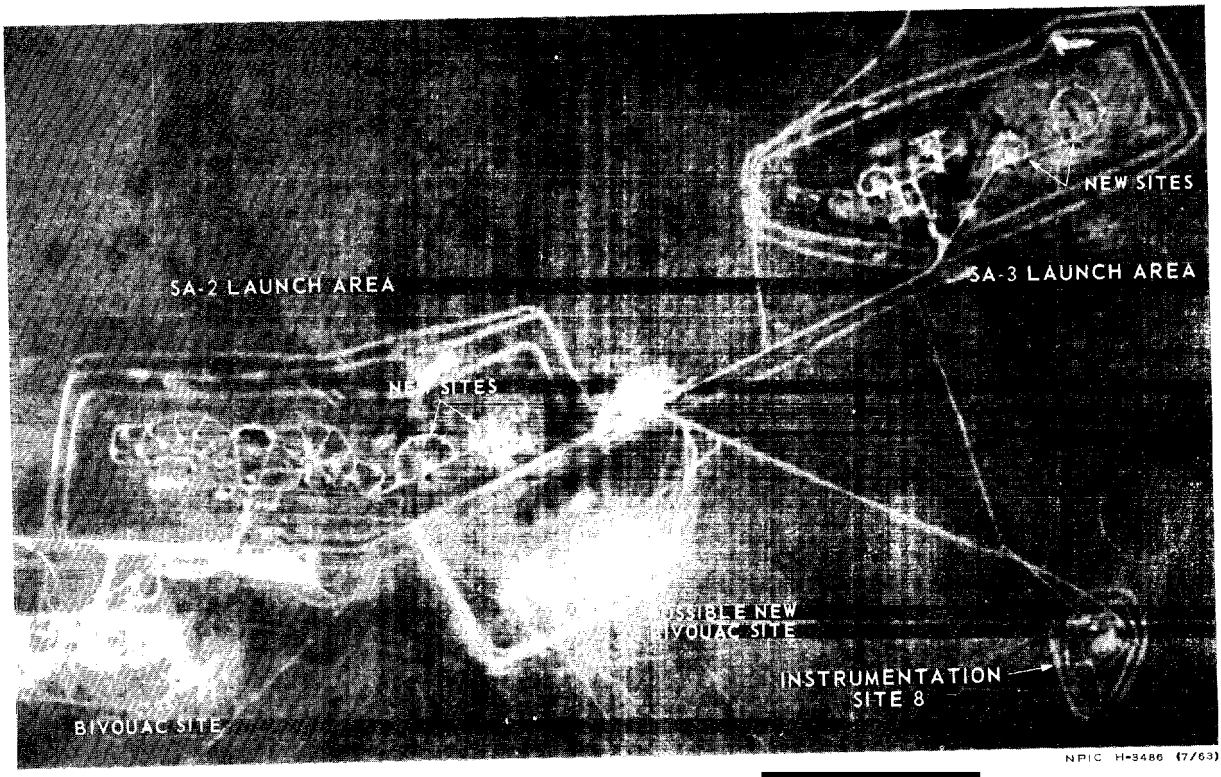

FIGURE 5. SA-2 AND SA-3 LAUNCH AREAS [redacted] 25X1D

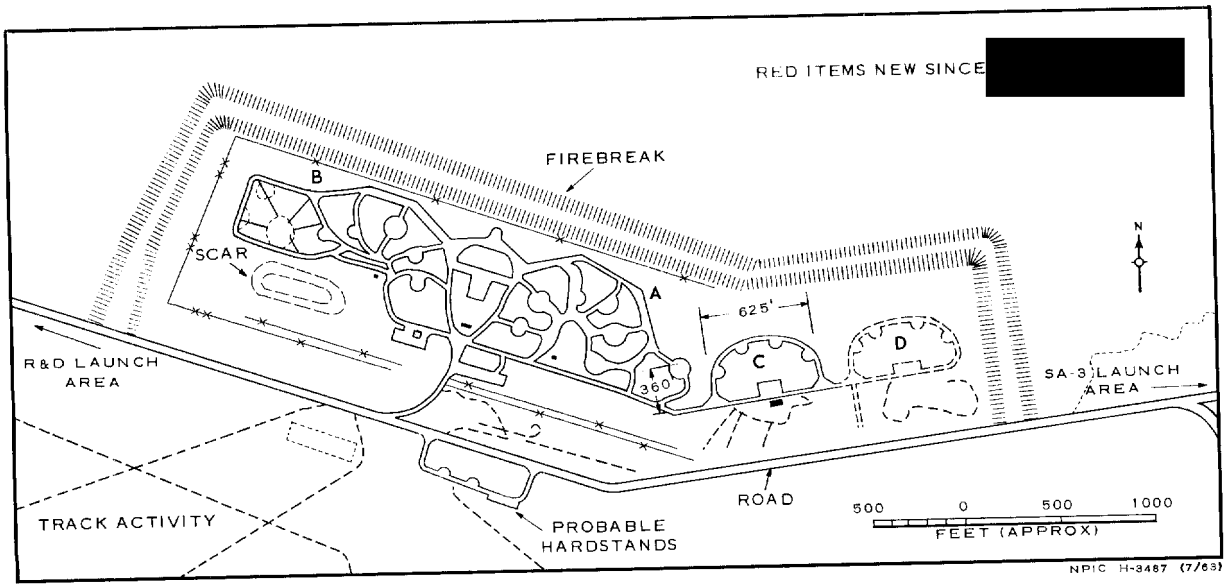

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FIGURE 6. SA-2 LAUNCH AREA.

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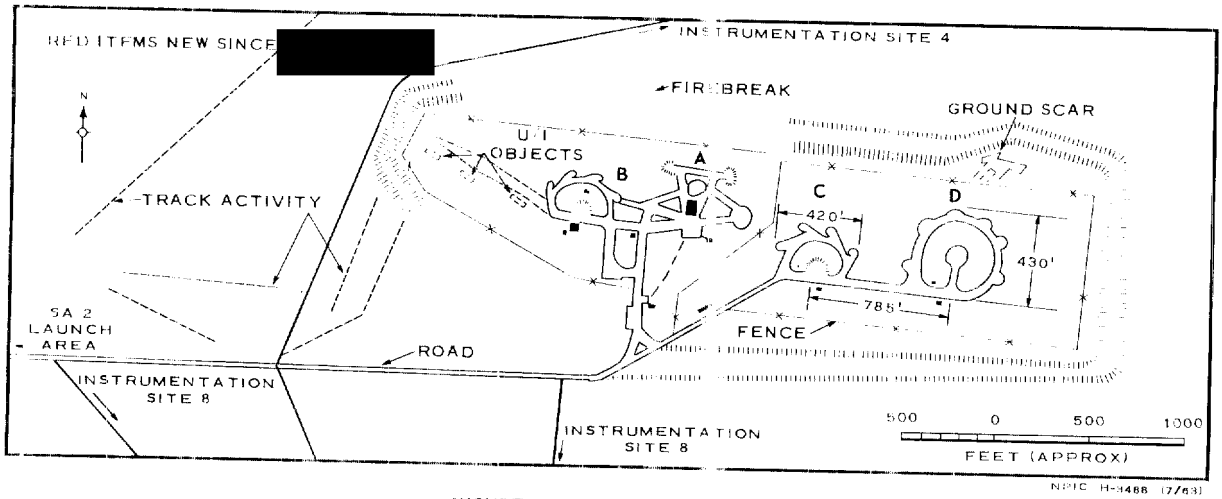

FIGURE 7. SA-3 LAUNCH AREA.

SA-3 LAUNCH AREA

The SA-3 Launch Area has been expanded to the east and west. Launch Sites A and B in the original area appeared inactive in [redacted] 25X1D The only structural change visible at either site is a revetment protecting the guidance area of Site B.

Two new sites (C and D) have been constructed in the expanded area east of Sites A and B (Figures 5 and 7). Site C appeared complete but inactive in [redacted] 25X1D It is semicircular and has four unrevetted circular launch positions connected to the outside of a perimeter road by short spur roads. The site measures 420 by 240 feet. The launch positions are 50-55 feet in diameter. Near the radial center of the site is a revetted guidance area 80 feet square. There are three probable buildings in the vicinity of the guidance area. In general, Site C is similar to Site B.

As Site D was under construction in [redacted] 25X1D [redacted] photography was checked to determine progress. The site appeared complete but inactive in [redacted] 25X1D Roughly circular, it has four launch positions and two hold positions located along the outside of a perimeter service road. The launch positions are on the forward side of the site, similar to Site C. The site is approximately 430 feet in diameter. The launch positions measure 50-55 feet in diameter, and the hold positions, approximately 60 feet. A central guidance area, visible in [redacted] 25X1D is 80 feet in diameter. However, on [redacted] 25X1D photography, the area appears to have been covered by a mound.

In the expanded area to the west of Sites A and B there are three unidentified objects of similar configuration.

PROBABLE SA-3 TRAINING SITES

Two SA-3 sites (Sites A and B) are located west of the SAM Launch Complex at 48-49-40N 45-38-20E and 48-49-10N 45-30-00E, respectively. They are similar in size and configuration to the newly constructed Site D in the SA-3 Launch Area within the SAM Launch Complex (Figure 5). However, neither site appears to have the same number of launch or hold positions as does Site D. This apparent difference may result from poor-quality photography or earth

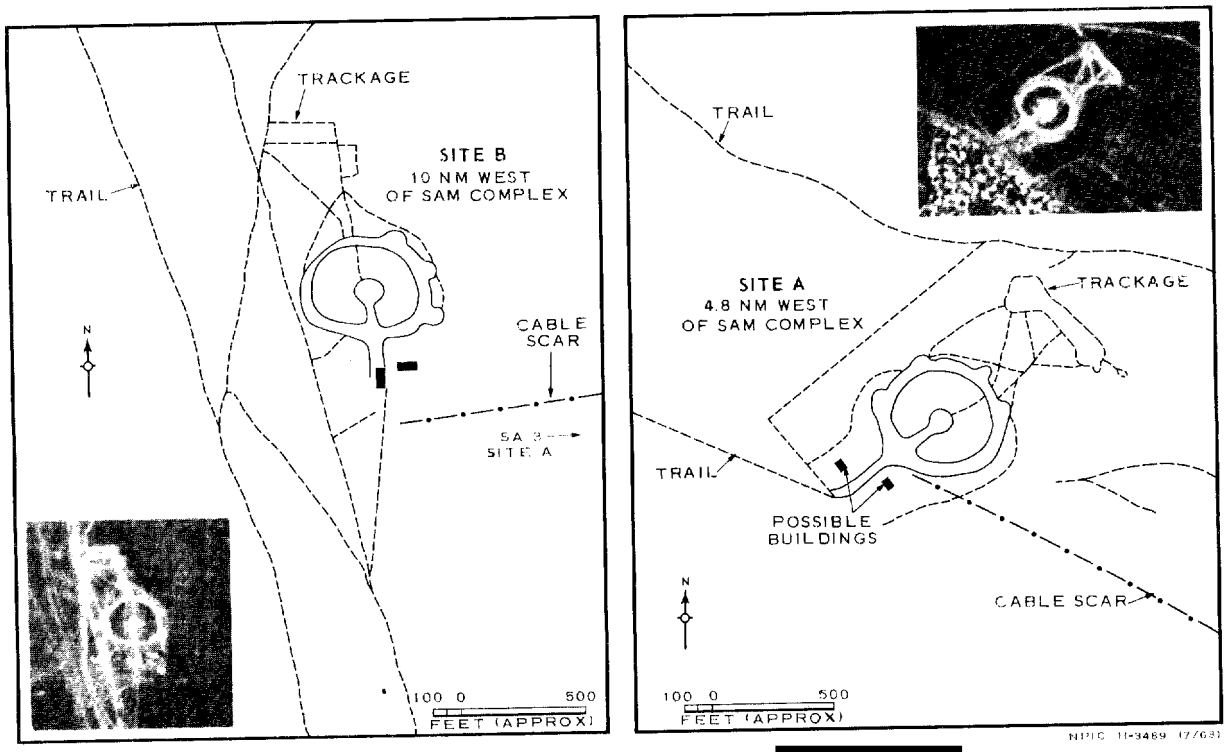

FIGURE 8. PROBABLE SA-3 TRAINING SITES [redacted] 25X1D

scraping which obscures the configuration of some of the positions, or the sites may still be under construction. Security fences were not apparent at either site. Neither site appeared active in [redacted] Cable scars indicate the sites utilize the existing test range facilities of the SAM Launch Complex. 25X1D

At Site A, three launch positions and one hold position are discernible along the outside of a circular service road. The launch positions and the guidance area do not appear to be revetted. Two possible buildings are located at the site. A cable scar extends east from the site to the SAM Launch Complex.

At Site B, two launch positions and one hold position are discernible along the outside of a circular service road. The launch positions and the guidance area do not appear to be revetted. Two support buildings are visible. A possible cable scar extends east from Site B toward Site A.

SAM TEST RANGE

Since [redacted] Instrumentation Site 1 has been abandoned. Instrumentation Site 3--which formerly had no permanent buildings--now has two buildings located within the site area. Instrumentation Site 8 is now surrounded by two graded firebreaks. Three instrumentation sites have been added to the SAM Test Range (Figure 1). 25X1D

One of these (Instrumentation Site 9) was first noted on photography of [redacted] 3/ It is located 3.5 nm northeast of Instrumentation Site 4 and is connected to that site by a probable buried cable. 25X1D

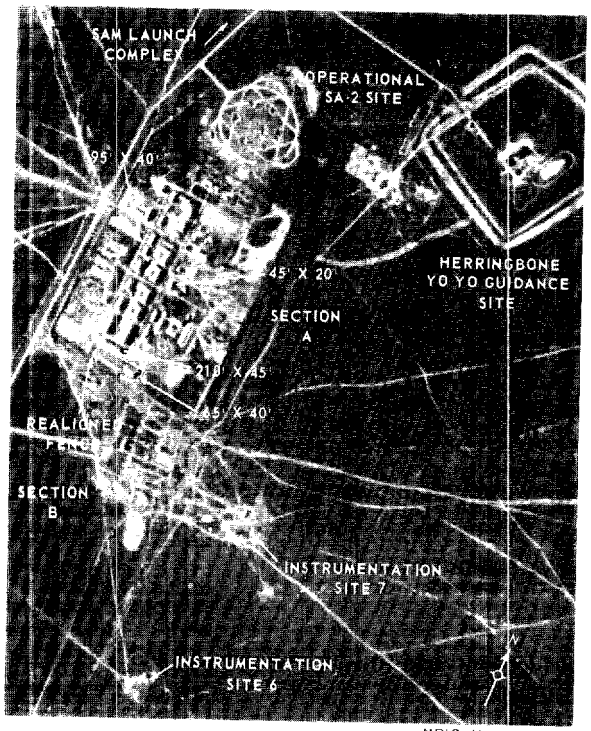

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FIGURE 9. HOUSING AND SUPPORT AREA [redacted]

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Two other instrumentation sites--first observed on photography of [redacted] are located forward of the SAM Test Range. One (Instrumentation Site 10) is located 13 nm east-northeast of Instrumentation Site 3 and is connected by cable to that site. The other (Instrumentation Site 11) is located 13 nm north-northwest of Instrumentation Site 2 and is connected by cable to that site. Instrumentation Sites 10 and 11 together with previously identified Instrumentation Site 6 form an equilateral triangle measuring approximately 23 nm on a side.

OPERATIONAL SA-2 SITE

An operational SA-2 site is located between the Herringbone YO YO Guidance Site and the Housing and Support Area (Figures 2 and 9). The site--constructed between [redacted] 25X1D 25X1D [redacted] has a star configuration. 3/

HOUSING AND SUPPORT AREA

A barracks building, 210 by 45 feet, and two support buildings, 95 by 40 feet and 45 by 20 feet, have been added to Section A of the Housing and Support Area (Figure 9). The barracks building was under construction in [redacted] 25X1D A fourth building, approximately 65 by 40 feet, is now located south of Section A adjacent to the security fence. This fence has been changed since previous coverage and excludes the fourth building from the secured area. Two storage buildings have been removed from Section B.

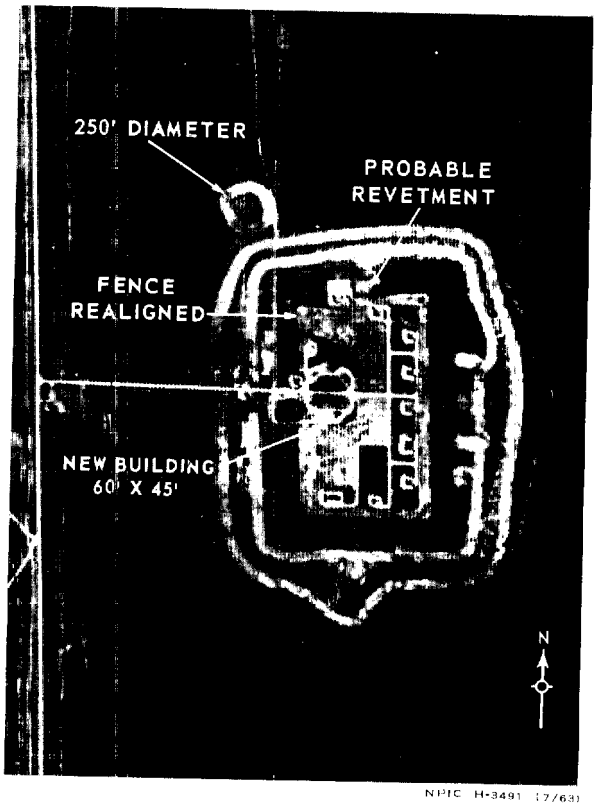

FIGURE 10. MISSILE CHECKOUT AND PROPELLANT STORAGE AREA [redacted] 25X1D

25X9

MISSILE CHECKOUT AND PROPELLANT STORAGE AREA

A second drive-through building--which has a possible gable roof and measures approximately 60 by 45 feet--has been completed (Figure 10). The foundation for this building was apparent in [redacted] 25X1D It is located opposite the drive-through checkout/maintenance building identified on earlier TALENT photography and south of that previously reported facility. The curved concrete roads serving these buildings are similar in design and come together to form a circular pattern, suggesting that the two buildings are associated in function.

A possible counterpart to the revetted structure on the south perimeter of the area is being constructed on the north perimeter. In [redacted] however, only a prepared area, 200 feet square, with construction activity on its south edge was evident. The construction lies between the double security fence. 25X1D

An area approximately 250 feet in diameter and surrounded by a firebreak is located outside the northwest edge of the Missile Checkout and Propellant Storage Area. The area with its firebreak was present on [redacted] photography; at that time it appeared to contain open storage. A trail leads from this area to the Missile Checkout and Propellant Storage Area. 25X1D

BASE SUPPORT COMPLEX

BASE SUPPORT AND HOUSING AREA

This area originally included a Base Support Section, a Housing Section, two Possible Storage Sections, and a Transloading Site.

Base Support Section. Eleven buildings in all have been added to this section (Figure 11). One storage or maintenance building has been constructed inside of the board fence in the northwest part of the section and two have been added outside of the board fence. Four new buildings, two large and two small, are present in the northeast part of the Base Support Section and a storage building has been added to the southeast part. Outside of the board fence to the east, two storage buildings and a small unidentified building have been added to the open storage area.

Housing Section. Five buildings have been added to this section.

Possible Storage Sections. The storage section which in [redacted] was east of the Housing Section has been disassembled. Two small storage buildings have been added to the storage section located south of the Housing Section. 25X1D

Transloading Site. Two loading aprons, one north and one south of the original apron, have been added to the Transloading Site. Three unidentified objects, possibly materiel or trucks, were evident on the original apron.

MARSHALLING AREA

Handling and storage facilities in the Marshalling Area have been increased. Two equipment checkout and storage pads have been added, bringing to seven the total number of such pads (Figure 12). In [redacted] all seven pads were heavily loaded with equipment but the small scale of the photography precluded identification 25X1D

of the materiel, which was arranged in uniform rows.

In addition to the new checkout and storage pads there are nine new storage- and maintenance-type buildings and a concrete loading apron. Materiel is present on and in the vicinity of the apron but its appearance is massive and bulky and unlike that seen on the seven equipment and storage pads where items are placed in uniform rows.

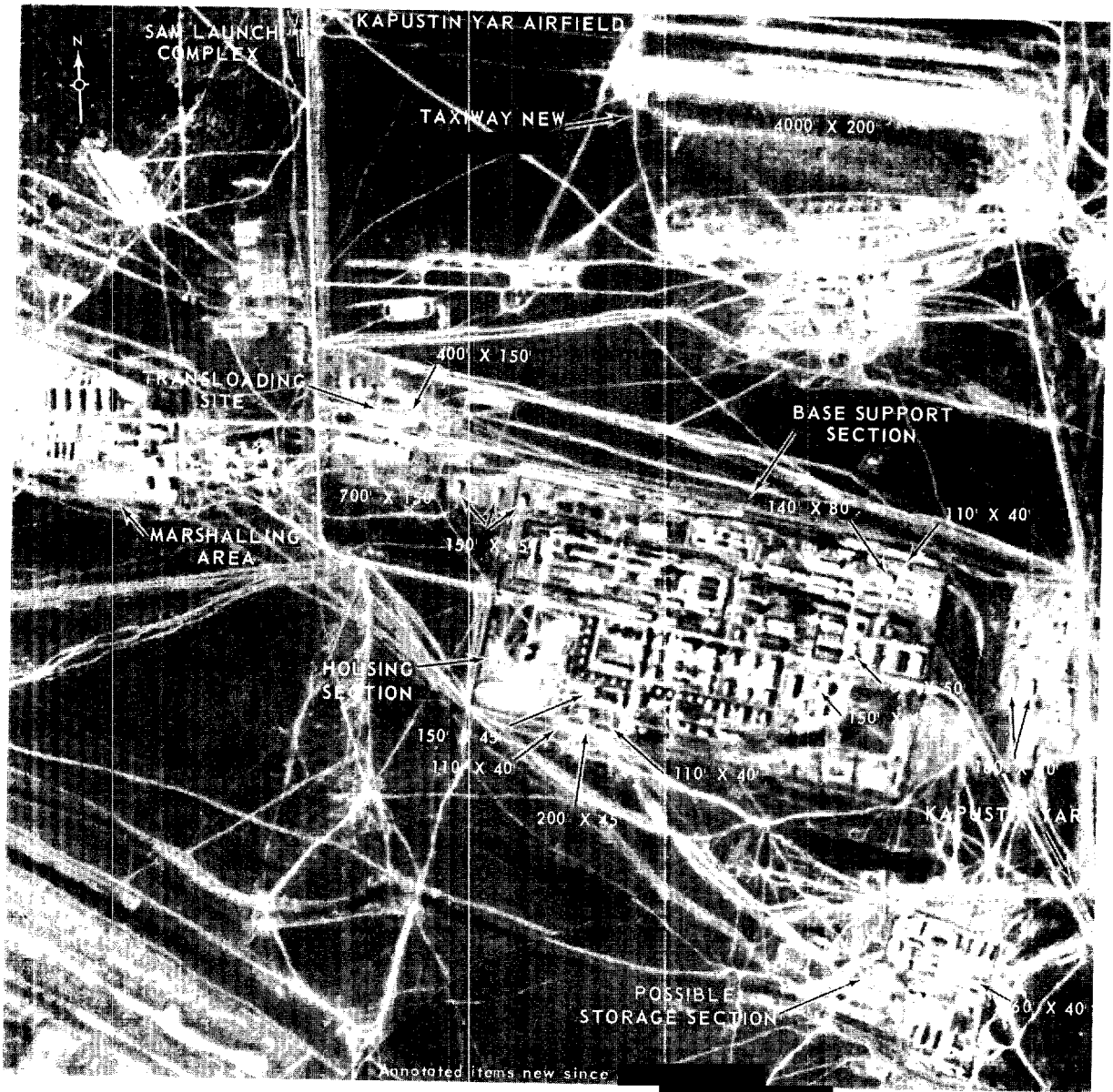

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FIGURE 11. BASE SUPPORT COMPLEX [redacted]

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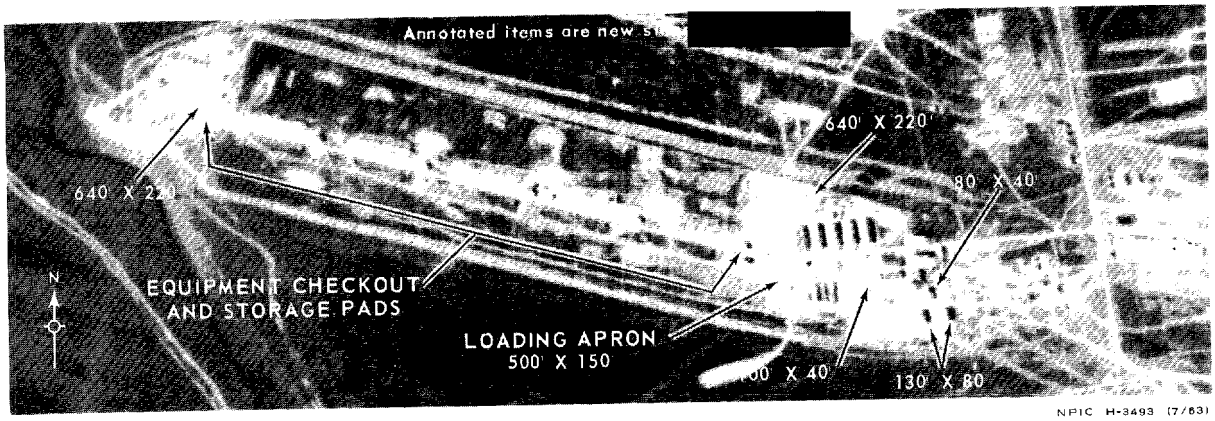

FIGURE 12. MARSHALLING AREA [redacted]

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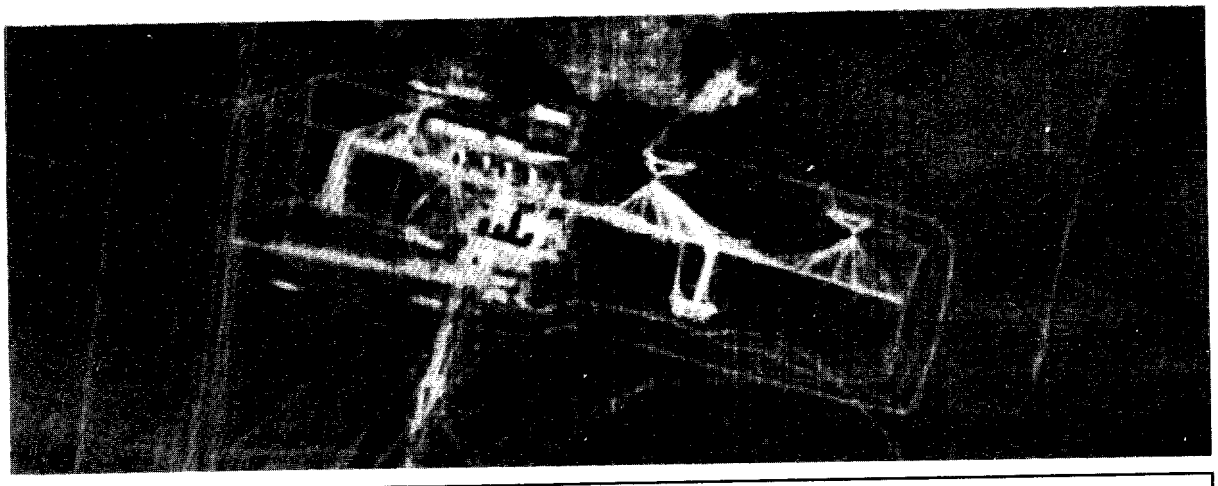

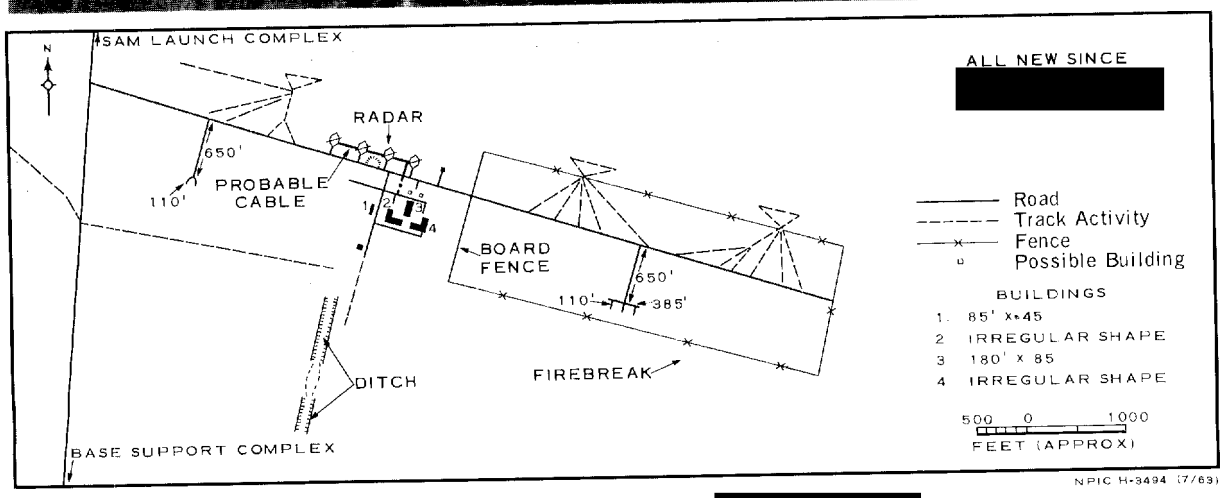

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FIGURE 13. ELECTRONICS SITE [redacted]

KAPUSTIN YAR AIRFIELD

The original 4,500- by 600-foot sod landing strip has been developed into a primary runway, 4,000 by 200 feet, with a prepared surface (Figure 11). A possible secondary landing strip, [redacted] is north of and parallel to the primary runway. Aircraft present in [redacted] included 3 straight-wing medium transports, 11 probable medium transports, 7 small unidentified aircraft, and 3 possible helicopters. By [redacted] a taxiway had been constructed south of and parallel to the primary runway.

ELECTRONICS SITE

A new radar site has been identified since [redacted] within the SAM Facilities (Figure 13). It is located 2 nm north of the Base Support Complex and 5.5 nm south of the SAM Launch Complex on the east side of the all-weather road connecting these two complexes.

Four similar radars on mounds are arranged in a straight line on the north side of the main road serving the radar site. A small revetment is located between the two inner radars, and a small building is located east of the radars.

South of the service road are four large buildings. A rectangular-shaped building measures 180 by 85 feet; an L-shaped building measures 185 feet on its long side, 120 feet on its short side and is 55 feet wide; another L-shaped building is 115 feet on both sides and 55 feet wide. Both L-shaped buildings have concrete aprons. The fourth building measures 85 by 45 feet. One definite and two possible small buildings are also located in the vicinity. A probable buried cable connects the four radars with one of the large buildings. A probable board security fence is visible only on the east side of the site. Heavy trackage in the area indicates that the site is still under construction.

The number of buildings at the site is greater than is necessary to support the four radars. The site, therefore, may be the central control for similar radars which may possibly be located in the area. The arrangement of the radars resembles those at Vladimirovka Airfield, which have been rearranged in a straight line on mounds.

A secured area, 3,400 by 1,400 feet, was observed on [redacted] photography east of the radar site and adjoining it. Photography of [redacted] revealed an extension of the main service road of the radar site eastward to the limits of the secured area. Unidentified construction is visible south of the road extension and heavy trackage is evident to the north. The construction appears to be a T-shaped road with three straight prongs jutting from the crossbar of the "T." This T-shaped road--which is located east of the large buildings in the radar site--appears to balance a probable road with two curved prongs which was observed west of the large buildings on photography of [redacted] Both roads are 650 feet in length. The straight prongs are approximately 110 feet in length. The curved prongs form a U-shaped pattern which measures approximately 110 feet from base to top.

REFERENCES

PHOTOGRAPHY

25X1D [redacted]

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AMS. Series N 501, Sheet NM 38-9, 2d ed, May 56, scale 1:250,000 (UNCLASSIFIED)

AMS. Series N 501, Sheet NM 38-11, 3d ed, May 58, scale 1:250,000 (UNCLASSIFIED)

AMS. Series N 501, Sheet NM 38-12, 2d ed, Oct 56, scale 1:250,000 (UNCLASSIFIED)

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2. NPIC. R-123/62, New-Type SAM Sites in the USSR, Aug 62 (TOP SECRET CHESS RUFF)

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REQUIREMENT

CIA. OSI/R-83/62 (partial answer)

NPIC PROJECT

JN-127/62

Approved For Release 2001/11/05 : CIA-RDP78B04560A000600010043-5
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